

Status of Toxic Heavy Metals in Cattle of Haryana

**Naveen Kumar, Sandeep Kumar, Anita Ganguly*,
Renu Gupta and Rahul Andrajpal**

*Department of Veterinary Physiology and Biochemistry,
Lala Lajpat Rai University of Veterinary and Animal Sciences,
Hisar-125001, Haryana, India*

Abstract—*The present study was conducted with the objective of analyse the toxic heavy metals in serum samples of cattle in different zones of Haryana. Twenty five samples per district of Haryana were used for the present study. Analysis of heavy metals viz. Arsenic (As), Cadmium (Cd), Lead (Pb), Mercury (Hg) levels was carried out by using Atomic Absorption Spectrophotometer (AAS). In cattle, observed mean levels of As, Cd, Pb and Hg were ranged from 0.0-0.087, 0.0-0.023, 0.0-0.115 and 0.0-0.23 ppm, respectively. The Cd content in serum of cattle of Panchkula district was found to be significantly ($p<0.05$) higher than all the other districts. Significantly ($p<0.05$) higher level of lead content was noted in Rohtak followed by Panchkula and Kurukshetra as compare to other districts of Haryana. Significantly higher mean value of Hg has been observed in Hisar, Kaithal, Karnal, Panipat, Sonipat, Rewari, Panchkula and Kurukshetra district of Haryana. Zone wise analysis revealed the highest mean value of As, Cd, Pb, Hg in zone I (Panchkula, Ambala, Kurukshetra, Yamuna Nagar, Kaithal, Karnal, Panipat, Sonipat) in cattle. It may be due to the reason that more industries are situated in this region. In the presents study, results are comparable with the past studies reported by different researchers and mostly the observed levels were within the permissible limits. However, this is the preliminary study and further work may be carried out by estimating the levels in more number of samples.*